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Florence Defaix

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EXAMINER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/666,316

**Applicant(s)**

DEFAIX ET AL.

**Examiner**

Phillip H. Nguyen

**Art Unit**

2191

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,6-11,14-21 and 24-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-11,14-21 and 24-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to the amendment filed 12/18/2008.
2. Claims 1-3, 6, 7, 10, 11, 14, 15, 17-19, and 21 have been amended
3. Claims 4, 5, 12, 13, 22, and 23 have been cancelled.
4. Claims 30-37 are newly added.
5. Claims 1-3, 6-11, 14-21, 24-37 remain pending in this application and have been considered below.

### ***Response to Amendment***

6. Objection to claims 1-3, 6, 7, 10, 15, 17-19, and 21 is hereby withdrawn in view of applicant's amendment.

### ***Response to Arguments***

7. Applicant's arguments filed 12/18/2008 have been fully considered but they are not deemed persuasive. However, a new ground of rejection is issued for claims 17 and 18, in view of applicant's amendment.

### **Applicant argues:**

- a) Examiner has improperly equated a web caching system with a file versioning proxy.
- b) The proxy server in Carter does not involve any form of proxy intermediary.
- c) Carter does not teach version control system

- d) Hino fails to teach version control.
- e) Why one would need to incorporate proxy server in managing the documents described in Hino.
- f) Ebata fails to teach version control and the proxy in Ebata is of the generic web based caching type.

**Examiner respectfully disagrees:**

a) Carter teaches in the background of his invention to insert a central server, commonly referred to as a **proxy server**, **not** the Web caching system as described in his claimed invention. As disclosed in Carter's background of invention, the proxy server stores copies of files, data, and/or applications accessed by a group of users and it is located between a group of users and target data to be downloaded (i.e. data server) in order to eliminates delays for the user when retrieving data previously accessed by the users. In addition, "a file versioning proxy" is not recited in the claim but a proxy server. Even assuming that the "file versioning proxy" is recited in the claim, it is reasonable to interpret the proxy server in Carter as a file versioning proxy because their characteristics are the same that is stored copies of files. Furthermore, if a proxy server in Carter is considered as a web caching system then the proxy server in the instant application is reasonable to interpret as a web caching system because their characteristics are the same.

b) As disclosed in the background of Carter's invention, the proxy server is located between a group of users and a target data (i.e. data server). It is in a form of proxy intermediary.

c) As explained above, the proxy server in Carter is a file versioning proxy.

d) Hino teaches "In the system, the check-in check-out management means may include means for, at the time of check-in, automatically creating a new document with the original document left as the old version and performing requested update processes on the new document in sequence" (see at least col. 2:22-26). In other words, Hino provides a document management means for controlling/managing the check-in check-out versions of documents. Therefore, Hino teaches version control

e) The examiner, in the previous non-final action, already provided reason(s) why one would have been motivated to incorporate a proxy server in managing the documents described in Hino. Applicant needs to provide evidence (an actual fact) whether or not one skill in the art would not incorporate a proxy server with Hino's approach.

f) Ebata teaches a proxy server stores versions of resources or data located in the server in order to provide the clients the stored versions of resources or data. This is considered as version control. Even assuming that Ebata fails to teach version control, Hino teaches version control as explained above. Therefore, Hino in combination with Ebata teaches the claimed invention.

**Claim Rejections - 35 USC § 103**

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (USPN 6,026,474, hereinafter Carter), in view of Hino (USPN 6,185,563 B1, hereinafter Hino).

As per claim 17:

Carter teaches

a) a computer readable medium providing a read-only cache to store copies of said requested version and any currently and previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device (see at least col. 1:47-60 "***This drawback is partially solved by inserting a central server, commonly referred to as a proxy server, between a group of users and target data to be downloaded (i.e. a data server). The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above,***

***provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user"***), wherein said central server device comprises a processor and computer readable medium comprising: computer executable instructions for storing said repository of at least one set of data for obtaining said plurality of versions (***the data to be downloaded is inherently stored at the server (i.e. data server) in order for the proxy server to cache the copies of accessed data***); and

b) a processor configured to execute computer readable instructions for running a version provider adapted to provide the requested version of the file to said client device, the version provider being configured to, upon receiving a request for said requested version from said client device, first check the read-only cache for the requested version to provide the requested version from said read-only cache when available and, if the requested version is not available, to request the requested version from said central server device on behalf of said client device (see at least col. 1:47-60 "***The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users... The proxy server manages each user's Internet connection (i.e. managing network traffic) and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user.***

***If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user"***), wherein said client device (see at least col. 1:49 "***a group of users*** (i.e. *client devices*)") comprises a processor and computer readable medium comprising computer executable instructions for running a version manager to generate requests for a copy of said requested version through said proxy server device to reduce network traffic between said proxy server device and said central server device and to reduce load on said central server device (see col. 1:54-60 "***The proxy server manages each user's Internet connection*** (i.e. *managing network traffic*) ***and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user"***).

Carter does not explicitly teach

a central server device comprises a processor and computer readable medium comprising: computer executable instructions for controlling all modification to said data, and for creating new versions of said file.

Hino teaches



a central server device comprises a processor and computer readable medium comprising: computer executable instructions for controlling all modification to said data, and for creating new versions of said file (see at least col. 2:22-26 "***In the system, the check-in check-out management means may include means for, all the time of check-in, automatically creating a new document with the original document left as the old version and performing requested update processes on the new documents in sequence***"; see also at least col. 5:1-3 "***a server body which has a function of storing and managing documents two or more clients share***"; see also ***FIG. 1***).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to incorporate the teaching of Hino into the Carter's background to allow the target data (i.e. data server) to control all modification to said data, and to create new versions of said file. The modification would have been obvious because it would allow the target data (i.e. data server) to manage data shared between clients.

As per claim 18:

Carter further teaches

wherein the read-only cache stores copies of more than one of said plurality of versions of said file requested from said central server device by said client device (see at least col. 1:50-60 "***...the proxy server caches data***

*accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user").*

10. Claims 17, 18, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebata et al. (USPN 6,513,061 B1, hereinafter Ebata), in view of Hino (USPN 6,185,563 B1, hereinafter Hino).

As per claim 17:

Ebata teaches

a) a computer readable medium providing a read-only cache to store copies of said requested version and any currently and previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device (see at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server***"),

wherein said central server device comprises a processor and computer readable medium comprising: computer executable instructions for storing said repository of at least one set of data for obtaining said plurality of versions (see at least **FIG. 6**); and

b) a processor configured to execute computer readable instructions for running a version provider adapted to provide the requested version of the file to said client device, the version provider being configured to, upon receiving a request for said requested version from said client device, first check the read-only cache for the requested version to provide the requested version from said read-only cache when available and, if the requested version is not available, to request the requested version from said central server device on behalf of said client device (see at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server***"), wherein said client device comprises a processor and computer readable medium comprising computer executable instructions for running a version manager to generate requests for a copy of said requested version through said proxy server device to reduce network traffic between said proxy server device and said central server device and to reduce load on said central server device ((see at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource***

***or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server").***

Ebata does not explicitly teach

a central server device comprises a processor and computer readable medium comprising: computer executable instructions for controlling all modification to said data, and for creating new versions of said file.

Hino teaches

a central server device comprises a processor and computer readable medium comprising: computer executable instructions for controlling all modification to said data, and for creating new versions of said file (see at least col. 2:22-26 "***In the system, the check-in check-out management means may include means for, all the time of check-in, automatically creating a new document with the original document left as the old version and performing requested update processes on the new documents in sequence***"; see also at least col. 5:1-3 "***a server body which has a function of storing and managing documents two or more clients share***"; see also ***FIG. 1***).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to incorporate the teaching of Hino into the Carter's background to allow the target data (i.e. data server) to control all modification to said data, and to create new versions of said file. The modification would have been obvious because it would allow the target data (i.e. data server) to manage data shared between clients.

As per claim 18:

Hino in combination with Ebata teaches all the limitations of the base claim and Ebata further teaches

wherein the read-only cache stores copies of more than one of said plurality of versions of said file requested from said central server device by said client device (see at least col. 13:43-47 "***What is important to this process is placed on the request that the application program downloaded onto the NC 2 must be constantly updated to the latest version, that is the application program cached inside of the SPS 2 must be constantly updated to the latest version***").

As per claim 37:

Hino in combination with Ebata teaches all the limitations of the base claim and Ebata further teaches

wherein said central server further comprises computer executable instructions for maintaining a list of listeners for registering said proxy server device to provide updates thereto (see at least col. 9:7-10 "***When the DDNS server receives the foregoing information from the SPS 2, the server 6 operates to register the SPS 2 in the SPS information list stored in a memory located inside the server 6***").

11. Claims 1-3, 6-16, 19-21, and 24-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hino (USPN 6,185,563 B1, hereinafter Hino), in view of either Ebata et al. (USPN 6,513,061 B1, hereinafter Ebata) or Carter et al. (USPN 6,026,474, hereinafter Carter).

As per claim 1:

Hino teaches

a) a central server device comprising a processor and computer readable medium comprising computer executable instructions for storing a repository of at least one set of data for obtaining a plurality of versions of a file, for controlling all modifications to said data, and for creating new versions of said file (see at least col. 2:22-26 "***In the system, the check-in check-out management means may include means for, all the time of check-in, automatically creating a new document with the original document left as the old version and performing requested update processes on the new documents in***

***sequence***"; see also at least col. 5:1-3 "***a server body which has a function of storing and managing documents two or more clients share***"; see also ***FIG. 1***); and

c) at least one client device comprising a processor and computer readable medium, said computer readable medium comprising computer executable instructions for running a version manager to generate requests for a copy of said requested version (see at least col. 6:42 "***when a client 40 makes a check-out request***"; see also ***FIG. 1***).

Hino does not explicit teach

b) a proxy server device comprising a processor and computer readable medium, said proxy server device being connected to said central server device, said proxy server device including a read-only proxy cache for storing copies of currently and previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device, said computer readable medium comprising computer instruction for providing a requested version from said read-only proxy cache when available, and for requesting said requested version from said central server device otherwise, said at least one client device being connected to said proxy server device, through said proxy server device to reduce network traffic between said proxy server device and said central server device and to reduce load on said central server device.

However, Ebata teaches

b) a proxy server device comprising a processor and computer readable medium, said proxy server device being connected to said central server device, said proxy server device including a read-only proxy cache for storing copies of currently and previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device, said computer readable medium comprising computer instruction for providing a requested version from said read-only proxy cache when available, and for requesting said requested version from said central server device otherwise, said at least one client device being connected to said proxy server device, through said proxy server device to reduce network traffic between said proxy server device and said central server device and to reduce load on said central server device (see at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server***").

More explicitly, Carter teaches

b) a proxy server device comprising a processor and computer readable medium, said proxy server device being connected to said central server device,



said proxy server device including a read-only proxy cache for storing copies of currently and previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device, said computer readable medium comprising computer instruction for providing a requested version from said read-only proxy cache when available, and for requesting said requested version from said central server device otherwise, said at least one client device being connected to said proxy server device, through said proxy server device to reduce network traffic between said proxy server device and said central server device and to reduce load on said central server device (see at least col. 1:47-60 "***This drawback is partially solved by inserting a central server, commonly referred to as a proxy server, between a group of users and target data to be downloaded (i.e. a data server). The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user***").

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to incorporate the teaching of Ebata or Carter into Hino's teaching to include a proxy server. The modification would have been obvious in order to curtail the network traffic and the load of the server.

As per claims 2 and 20:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and Ebata further teaches

a plurality of branches and a plurality of proxy server devices each comprising a processor and computer readable medium (see at least **FIG. 1**; see also at least col. 6:62-63 "**nodes 2 and 7 are service proxy servers for executing a program stored in a memory located in the node itself and relaying an access from a client to the NCS 1**"), wherein, for a first branch of said plurality of branches, said central server device further comprises computer executable instructions for storing a list of proxy server devices selected from said plurality of proxy server device and associated with said first branch (see at least col. 7:21-23 "**A node 6 is a dynamic DNS server (referred to as a DDNS server) which manages the location information and the load conditions of the SPS (service proxy servers) 2 and 7**"; see also at least col. 20:55-63 "**a proxy server selecting unit for selecting one of the proxy servers according to the predetermined selecting rule, based on geographic information of said client and said location information of each of said proxy servers**

*stored in said proxy server information storing unit, when receiving from said client an inquiry request for inquiring a network address of a server corresponding to a domain name of said server, the geographic location information of said client being attached to said inquiry request"); and for sending a update to notify each proxy server device in the list when a change is made to said first branch (see at least col. 15:13-14 "**if the SPS (service proxy server) 2 selected as a proxy server caches the latest version of the user file inside of itself...**" – Which indicates that DNS server selects a proxy server to indicate the available latest version of the user file in order to cache the latest version of the user file inside the proxy server).*

As per claim 3:

Hino in combination with Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

wherein said central server device includes an access control system comprising computer executable instructions for validating requests received by said central server device (see at least col. 6:45-48 "**Upon accepting a check-out request from a client 40 (step A1 in FIG. 6), the server 10 determines whether or not the check-out of a specified document is possible on the basis of a document management number specified in the request"**).

As per claim 6:

Hino in combination with Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

wherein the at least one client device further comprises computer executable instructions for modifying the repository through said central server device (see at least col. 5:25-32 "**Reference numeral 40 denotes clients that are line connected to the server 10 through a communications path 50 such as a local area network (LAN). Each client has a function of referencing (retrieving, printing, etc.) any document in the database freely and a function of updating the document borrowed through the check-out processing and checking in (i.e., returning) it under the check-in check-out management of the server 10**").

As per claim 7:

Hino in combination with Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

wherein the central server device includes a checkout mechanism comprising computer executable instructions for controlling modification to the repository (see at least col. 5:1-3 "**a server body which has a function of storing and managing documents two or more clients share and has its internal storage (not shown) stored with a check-in check-out processing program for implementing a check-in check-out based document management facility to be described later**").

As per claims 8 and 26:

Hino in combination with Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

wherein the central server device includes a log of changes for controlling modification to the repository (see at least col. 5:39-44 "***The status recording entries of the check-in check-out table 21 include, as shown in FIG. 3, items of document management number (DOCUMENT No.), check-out user (CHKOUT\_USER), check-out date (CHKOUT\_DATE), check-out time limit (CHKOUT\_LIMIT), and check-in status (CHKIN\_STATUS)***").

As per claims 9, 16, and 27:

Hino in combination with either Carter or Ebata teaches all the limitations of the base claim and Hino in combination with either Ebata or Carter further teaches

wherein the log is used to update said proxy server device after a disruption to the connection between the proxy server device and the central server device (see Ebata at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server***" – *The*

*combination of Hino and Ebata allows the proxy server to download updated data from the server).*

Or with Carter teaches

wherein the log is used to update said proxy server device after a disruption to the connection between the proxy server device and the central server device (see at least col. 1:50-60 "***The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user***" – *The combination of Hino and Carter allows the proxy server to download copies of updated data from the server).*

As per claims 10 and 28:

Hino in combination with Ebata or Carter teaches all the limitations of the base claim and Ebata further teaches

a plurality of chained together proxy server devices each comprising a processor and computer readable medium comprising computer executable instructions for serving a geographic area, wherein each proxy server device of said plurality of chained together proxy server devices is connected to at least one client device, said plurality of chained together proxy server devices each being connected to one proxy server device, said one proxy server device being connected to said central server device (see at least **FIG. 1**).

As per claim 11:

Hino further teaches

a) a central server receiving from the first interconnected client, a request for a lock on a requested version of a file in the version control system, said requested version being one of a plurality of versions of said file recoverable from a set of data stored in a repository at said central server (see at least col. 6:42 **"when a client 40 makes a check-out request"**; see also **FIG. 1 – connection must be established in order for the client to make a request**), said lock permitting only said first interconnected client to modify said version of said file (see at least col. 5:24-31 **"Reference numeral 40 denotes clients that are line connected to the server 10 through a communications path 50 such as a local area network (LAN). Each client has a function of referencing (retrieving, printing, etc.) any document in the database freely and a function of updating the document borrowed through the check-out**

***processing and checking in (i.e. returning) it under the check-in check-out management of the server 10");***

b) the central server checking whether the requested version is unlocked and, if the requested version is unlocked, granting the request of said first interconnected client through said first intervening proxy (see at least col. 6:45-48 ***"Upon accepting a check-out request from a client 40 (step A1 in FIG. 6), the server 10 determines whether or not the check-out of a specified document is possible on the basis of a document management number specified in the request"***);

c) the central server sending an update to said second client and to said second proxy notifying the second client of the granting of the request (see at least col. 9:39-42 ***"A message to the effect that the document is being checked out is sent to the client 40 to thereby prevent the concurrent double updating of the same document by two or more users"***); and

d) the central server receiving from said first interconnected client, a modification of said version of said file performed by said first interconnected client (see at least col. 5:24-31 ***"Reference numeral 40 denotes clients that are line connected to the server 10 through a communications path 50 such as a local area network (LAN). Each client has a function of referencing (retrieving, printing, etc.) any document in the database freely and a function of updating the document borrowed through the check-out***



***processing and checking in (i.e. returning) it under the check-in check-out management of the server 10").***

Hino does not explicitly teach

first and second intervening proxies.

However, Ebata teaches

first and second proxies (see at least ***FIG. 1 - showing the network system of proxy servers, domain servers, network computers, etc.***; see also at least col. 6:62-63 ***"The nodes 2 and 7 are service proxy servers (referred to as an SPS)..."***; see also at least col. 5:54-59 ***"The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server"***).

More explicitly, Carter teaches

proxy server (see at least col. 1:50-60 ***"The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet***

***connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user").***

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to incorporate either the teaching of Ebata or Carter into Hino's teaching to include a proxy server. The modification would have been obvious in order to curtail the network traffic and the load of the server.

As per claim 14:

Hino in combination with Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

said central server sending modification to said second client (see at least col. 9:39-42 "***A message to the effect that the document is being checked out is sent to the client 40 to thereby prevent the concurrent double updating of the same document by two or more users***") and to said second proxy (***Hino in combination with either Ebata or Carter would allow sending modification to proxy in order to cache the copies of files in the proxy server***).

As per claim 15:

Hino further teaches

a) a computer readable medium providing a repository of at least one set of data for obtaining a plurality of versions of a file used in said software development (see at least **FIG. 1**; see also col. 5:10-12 "**Reference numeral 20 denotes a document management database (management DB) that implements the document management facility on a check-in check-out management basic...**");

b) a processor configured to execute computer executable instructions for running a version manager to provide a requested version of said file from said repository and to control modifications to said data (see at least col. 6:45-67 – col. 7:1-3 "**Upon accepting a check-out request from a client 40 (step A1 in FIG. 6), the server 10 determines whether or not the check-out of a specified document is possible on the basis of a document management number specified in the request...In this manner, the specified document is checked out (i.e., the document is lent out to the user)**") and to create new versions of said file (see at least col. 2:22-26 "**In the system, the check-in check-out management means may include means for, at the time of check-in, automatically creating a new document with the original document left as the old version and performing requested update processes on the new document in sequence**");

c) computer executable instructions for running an access control system adapted to manage a request from the client device to modify the contents of said repository, wherein said client device comprises a processor and computer readable medium comprising computer executable instructions for running a version manager to generate requests for a copy of said requested version(see at least col. 6:45-48 "***Upon accepting a check-out request from a client 40 (step A1 in FIG. 6), the server 10 determines whether or not the check-out of a specified document is possible on the basis of a document management number specified in the request***"); and

d) a memory structure for storing a log of modifications made to the contents of said repository for storing a list of portions of said repository (see at least col. 5:39-44 "***The status recording entries of the check-in check-out table 21 include, as shown in FIG. 3, items of document management number (DOCUMENT No.), check-out user (CHKOUT\_USER), check-out date (CHKOUT\_DATE), check-out time limit (CHKOUT\_LIMIT), and check-in status (CHKIN\_STATUS)***").

Hino does not explicitly teach

wherein said proxy server device comprises a processor, computer readable medium and read only proxy cache for storing copies currently and previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device, said computer

readable medium at said proxy server device comprising computer executable instructions for providing a requested version from said read-only proxy cache when available and for requesting said requested version from said central service otherwise.

However, Ebata teaches

wherein said proxy server device comprises a processor, computer readable medium and read only proxy cache for storing copies currently and previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device, said computer readable medium at said proxy server device comprising computer executable instructions for providing a requested version from said read-only proxy cache when available and for requesting said requested version from said central service otherwise (see at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server***").

More explicitly, Carter teaches

wherein said proxy server device comprises a processor, computer readable medium and read only proxy cache for storing copies currently and

previously accessed ones of said plurality of versions obtained from said repository through communication with said central server device, said computer readable medium at said proxy server device comprising computer executable instructions for providing a requested version from said read-only proxy cache when available and for requesting said requested version from said central service otherwise (see at least col. 1:50-60 "***The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user***").

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to incorporate either the teaching of Ebata or Carter into Hino's teaching to include a proxy server. The modification would have been obvious in order to curtail the network traffic and the load of the server.

As per claim 19:

Hino further teaches

a) storing a repository of at least one set of data for obtaining a plurality of versions of a file on a central server (see at least **FIG. 1**; see also col. 5:10-12

**"Reference numeral 20 denotes a document management database (management DB) that implements the document management facility on a check-in check-out management basic..."**), said central server comprising a processor and computer readable medium comprising computer executable instructions for storing said repository, for obtaining said plurality of versions of said file, for controlling all modifications to said data and for creating new versions of said file (see at least col. 2:22-26 **"In the system, the check-in check-out management means may include means for, at the time of check-in, automatically creating a new document with the original document left as the old version and performing requested update processes on the new document in sequence"**);

c) a client comprising a processor and computer readable medium, said computer readable medium comprising computer executable instructions for running a version manager to generate a request for a copy of a requested version of said file from said repository (see at least col. 6:42 **"when a client 40 makes a check-out request"**; see also **FIG. 1**).

Hino does not teach

b) establishing communication between said central server and a proxy server, said proxy server comprising a processor, computer readable medium, and a read-only cache for storing copies of currently and previously accessed ones of said plurality of versions obtained from said repository through communication between said central server and said proxy server;

c) establishing communication between said proxy server and a client comprising a processor and computer readable medium, said computer readable medium comprising computer executable instructions for running a version manager to generate a request for a copy of a requested version of said file from said repository through said proxy server to reduce network traffic between said central server and said client and to reduce load on said central server; and

d) causing said proxy server to provide said requested version from said read-only cache when available and by requesting said requested version from said central server otherwise.

Ebata teaches

b) establishing communication between said central server and a proxy server, said proxy server comprising a processor, computer readable medium, and a read-only cache for storing copies of currently and previously accessed ones of said plurality of versions obtained from said repository through communication between said central server and said proxy server (see at least col. 5:54-59 "***The proxy server therefore provides the capability of***



***downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server"*** – The communication between the server and the proxy server must be established in order to download resource or data located in the server);

c) establishing communication between said proxy server and a client comprising a processor and computer readable medium, said computer readable medium comprising computer executable instructions for running a version manager to generate a request for a copy of a requested version of said file from said repository through said proxy server to reduce network traffic between said central server and said client and to reduce load on said central server (see at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server"***)

d) causing said proxy server to provide said requested version from said read-only cache when available and by requesting said requested version from said central server otherwise (see at least col. 5:54-59 "***The proxy server therefore provides the capability of downloading the resource or data located in the server and caching it on the timing when the request from***

***the client is received and providing the client with the cached resource or data for the purpose of curtailing the traffic and the load of the server").***

More explicitly, Carter teaches

b) establishing communication between said central server and a proxy server including a read-only cache configured to store copies of currently and previously accessed ones of said plurality of versions obtained from said repository through communication between said central server and said proxy server (see at least col. 1:50-60 "***The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user***" – *The communication between central server and proxy server must be established in order to cache copies of the files stored in the server*);

c) establishing communication between said proxy server and a client comprising a processor and computer readable medium, said computer readable medium comprising computer executable instructions for running a version

manager to generate a request for a copy of a requested version of said file from said repository through said proxy server to reduce network traffic between said central server and said client and to reduce load on said central server (see at least col. 1:50-60 "***The proxy server manages each user's Internet connection (i.e. managing network traffic) and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user (i.e. reduce load on central server)***"); and

d) causing said proxy server to provide said requested version from said read-only cache when available and by requesting said requested version from said central server otherwise (see at least col. 1:50-60 "***...since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user***").

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to incorporate either the teaching of Ebata or Carter into Hino's teaching to include a proxy server. The modification would have been obvious in order to curtail the network traffic and the load of the server.

As per claim 20:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and further teaches

maintaining a list of additional proxy servers in the version control system, said additional proxy servers being in addition to said proxy server in communication with said client (see Ebata at least col. 7:21-23 ***"A node 6 is a dynamic DNS server (referred to as a DDNS server) which manages the location information and the load conditions of the SPS (service proxy servers) 2 and 7"***; see also Ebata at least col. 20:55-63 ***"a proxy server selecting unit for selecting one of the proxy servers according to the predetermined selecting rule, based on geographic information of said client and said location information of each of said proxy servers stored in said proxy server information storing unit, when receiving from said client an inquiry request for inquiring a network address of a server corresponding to a domain name of said server, the geographic location information of said client being attached to said inquiry request"***); and

notifying said additional proxy servers in the list when a change is made to said versioned file (see Ebata at least col. 15:13-14 ***"if the SPS (service proxy server) 2 selected as a proxy server caches the latest version of the user file inside of itself..."*** – Which indicates that DNS server selects a proxy server to indicate the available latest version of the user file in order to cache the latest version of the user file inside the proxy server).

Or Hino teaches

notifying said additional proxy servers in the list when a change is made to said versioned file (see Hino at least col. 9:39-42 "***A message to the effect that the document is being checked out is sent to the client 40 to thereby prevent the concurrent double updating of the same document by two or more users***" – *The combination of Hino and either Ebata or Carter would allow the server to notifies the proxy server when changes are made to the files stored in the server*).

As per claim 21:

Hino in combination with Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

wherein said central server device includes an access control system for validating requests received by said central server from said proxy server, said computer-readable medium further comprising executable instructions for the following step: validating requests received by said central server (see at least col. 6:45-48 "***Upon accepting a check-out request from a client 40 (step A1 in FIG. 6), the server 10 determines whether or not the check-out of a specified document is possible on the basis of a document management number specified in the request***" – *The combination of Hino and either Ebata*

*or Carter would allow the server to validate the proxy server when requesting for copies of data).*

As per claim 24:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and further teaches

said client requesting via said proxy server modification to said versioned file in said repository (see at least col. 1:50-60 "***The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user***" – The combination of Hino and Carter would allow the proxy server to store copies of version files and would allow client requesting via proxy server modification to copied versioned files); and

said proxy server requesting said central server to make said modification to said versioned file in said repository (see at least col. 1:50-60 "***The proxy server provides a degree of sharing between individual users caches,***

*because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user" - The combination of Hino and Carter would allow the proxy server to make a request the server to modify the versioned files).*

As per claim 25:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

controlling modification of the repository via a checkout mechanism comprising part of said central server (see at least col. 6:45-48 "***Upon accepting a check-out request from a client 40 (step A1 in FIG. 6), the server 10 determines whether or not the check-out of a specified document is possible on the basis of a document management number specified in the request***").

As per claim 29:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and Carter further teaches

wherein said proxy server device is adapted to operate transparently to user of said at least one client device (see at least col. 1:50-60 "***The proxy server provides a degree of sharing between individual users caches, because the proxy server caches data accessed by the entire group of users. Stored data may include cached copies of Web pages, image files, JAVA applets, and ActiveX controls. The proxy server manages each user's Internet connection and, as mentioned above, provides a degree of data caching between users of the system, since the proxy server may cache data downloaded by a first user. If that data remains in the proxy server's cache when a second user requests it, the proxy server can supply the data to the second user***").

As per claims 30 and 34:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

wherein said central server device further comprises a server cache for storing copies of currently and previously accessed ones of said plurality of versions obtained from said repository (see at least FIG. 1; see also col. 5:18-19 "***Reference numeral 30 denotes a document storage unit that stores***



***documents that two or more clients share and takes in and takes out documents under the document management control of the server 10").***

As per claims 31 and 35:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and Ebata further teaches

wherein said central server further comprises computer executable instructions for maintaining a list of listeners for registering said proxy server device to provide updates thereto (see at least col. 9:7-10 "***When the DDNS server receives the foregoing information from the SPS 2, the server 6 operates to register the SPS 2 in the SPS information list stored in a memory located inside the server 6***").

As per claims 32 and 36:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and Hino further teaches

wherein said central server device further comprises computer executable instructions for maintaining an access control list for controlling access to said repository (see at least col. 5:39-43 "***The status recording entries of the check-in check-out table 21 include, as shown in FIG. 3, items of document management number (DOCUMENT No.), check-out user (CHKOUT\_USER),***

***check-out date (CHKOUT\_DATE), check-out time limit (CHKOUT\_LIMIT), and check-in status (CHKIN\_STATUS)***”).

As per claim 33:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim and Ebata further teaches

wherein said proxy server device further comprises computer executable instructions for registering itself with said central server device for updating said read-only proxy cache when changes are made to said repository (see at least col. 9:7-10 "***When the DDNS server receives the foregoing information from the SPS 2, the server 6 operates to register the SPS 2 in the SPS information list stored in a memory located inside the server 6***").

12. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (USPN 6,026,474, hereinafter Carter), in view of Hino (USPN 6,185,563 B1, hereinafter Hino), and in further view of Ebata et al. (USPN 6,513,061).

As per claim 37:

Hino in combination with either Ebata or Carter teaches all the limitations of the base claim but fails to teach

wherein said central server further comprises computer executable instructions for maintaining a list of listeners for registering said proxy server device to provide updates thereto.

However, Ebata teaches

wherein said central server further comprises computer executable instructions for maintaining a list of listeners for registering said proxy server device to provide updates thereto (see at least col. 9:7-10 "***When the DDNS server receives the foregoing information from the SPS 2, the server 6 operates to register the SPS 2 in the SPS information list stored in a memory located inside the server 6***").

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to incorporate the teaching of Ebata into Hino and Carter teachings to include registering said proxy server device to provide updates thereto. The modification would have been obvious for verification purposes.

### ***Correspondence Information***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN  
3/6/2009

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191